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ABSTRACT

This publication provides suggestions for organizing junior high/middle school instruction and staffing in order to motivate and challenge early adolescents to develop informed and responsible behavior. Most of the booklet consists of short sections that deal with the various curriculum areas typical of junior highs and middle schools. Each of these sections provides a brief overview of one curriculum area and includes subsections on instructional rationale, goals and objectives, instructional format, and evaluation, plus a short bibliography relevant to that curriculum area. In addition to the sections on different curriculum areas, there are also several short sections that focus on some of the characteristics of early adolescents, on organizing learning and instruction for junior high/middle school students, on staffing junior high/middle schools, and on an educational philosophy for junior high/middle schools. A selected general bibliography of publications dealing with junior high/middle schools is also included. (JG)

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PROPOSED

STANDARDS & GUIDELINES

FOR

Middle/Junior High Schools

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FOREWORD

As Commissioner of Education, I endorse efforts to provide quality learning experiences for that unique group of eleven to fourteen year old youths, usually referred to as early adolescents or Middle/Junior High School students.

The period of early adolescents is characterized by the emergence of the individual from childhood to young adulthood; it is during this period that youth select their basic values and the characteristics by which they will be identified as adults for the rest of their lives; it is most important to provide them with those learning experiences and services which will enhance their maturing into productive, self-directing and effective citizens.

It is important for all to better understand and recognize the importance of this stage of maturation in the development of young adults. We must support quality learning experiences that have depth and breadth for this age group in order to provide them with the skills, knowledge and experiences adequate to making educational and vocational decisions; wise decisions based on these fundamentals are essential to earning a living, functioning intelligently and living effectively in our democratic society.

I extend the Department's sincere thanks to each teacher, administrator, state board member, citizen and consultant who has contributed to the original draft or to the updating which have made this timely document available to the State of New Hampshire.

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Our thanks to the many who have made valuable contributions and suggestions.

New Hampshire
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Concord, New Hampshire 03301
January, 1976

PREFACE

Students in the grades usually associated with the Middle/ Junior High years make up over one-third of all students in our schools. The current low priority for providing adequate educational programs and services for these youths during this most critical period in their development is contrasted by the fact that "Standards and Recommended Practices" are already in force for elementary and high school students.

Our Middle/Junior High School students need high priority of consideration in the allocation of educational resources if they are to become the effective, productive citizens our State needs and their own self-realization warrants.

These "Proposed Standards and Recommendations for Middle/ Junior High Schools" can establish a higher priority for implementing needed programs and services for these youths.

This publication provides suggestions for organizing instruction and staffing which will motivate and challenge early adolescents to develop informed and responsible behavior.

The section "Meet the Student" identifies some of the characteristics of early adolescents. This section may be used as a refresher by calling attention to the unique needs of these students and provide a basis for developing programs and instructional strategies to meet these needs.

Each curriculum area is presented in a brief overview under the headings:

Rationale	Goals and Objectives	Bibliography
Instructional Format	Evaluation	

This guide provides a reference point from which each staff member may develop curriculum outlines and teaching units relevant to the needs of students.

A statement of philosophy is offered as an example to encourage each school through its administration, staff, students and community to develop its own philosophy. Such a philosophy for a given school should be consistent with students' needs, community expectations, resources and serve as a basis for decisions affecting learning opportunities and staffing.

The short bibliography with each section will help in specific content areas while a selected bibliography indicates references for reading and research on the concept of the Middle/Junior High School.

MEET THE STUDENT

Students come to the Middle/Junior High School with a wide range of abilities, achievement levels, interests and previous experiences. This range widens and deepens with age. Careful planning is imperative so that students can tie together their elementary, middle/junior high and high school educational experiences.

In order to develop a learning environment conducive to the maximal development of middle/junior high school students, it is essential that all personnel involved appreciate and understand the characteristics of these students.

It is important that each student be viewed as a desirable, acceptable individual. Every student regardless of his intellectual capacity, emotional or physical condition should be provided with a successful and satisfying educational experience in the Middle/Junior High School.

In working with adolescents one should keep in mind that observable behavior is often a cover-up for real concerns.

One can observe among any group of adolescents:

- rapid and uneven growth;
- poor coordination and lack of balance;
- intense interest in the here and now;
- wavering interest span;
- the desire to excel;
- the earlier maturation of girls;
- quick flairs of temper;
- need of special services for disabilities;
- quick changes in behavior from
  - restless - lethargic
  - adoring - over-critical

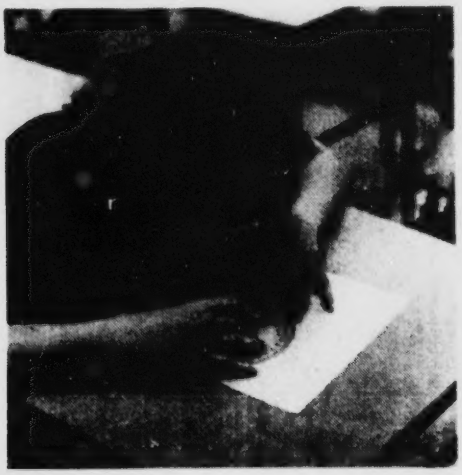
agreeable - rebellious
boisterous - quiet or withdrawn

Students need:
- to understand their own physical and emotional changes as normal, natural and desirable;
- acceptance and sympathetic understanding by peers and adults;
- help to meet failure and disappointments;
- affection and sense of belonging;
- a reasonable number of successes;
- active physical participation and exercise;
- adequate rest;
- good nutrition;
- group participation for social development;
- varied activities to avoid monotony and fatigue.

Students are able to:
- assume and respond to leadership;
- establish short term goals;
- become actively involved with something of interest;
- evaluate peers and adults.

Above all Middle/Junior High School students are intensely concerned with:
- irregularities such as skin blemishes, scars and obesity;
- boy-girl relationships;
- personal appearance and "in" styles of clothing, hair-do's and popularity;
- peer and adult relationships.

Yesterday, they were lovable children; today, they are responding to powerful drives from within to grow, develop and to be! Tomorrow, they emerge as young adults.



ORGANIZING LEARNING AND INSTRUCTION FOR MIDDLE/JUNIOR HIGH SCHOOL STUDENTS

For effective learning, the developmental characteristics and needs of early adolescents must be used as the basis for programming, organizing instruction and the selection of staff in Middle/Junior High Schools.

The divergence in development, whether physical or mental, must be under constant consideration and accommodated by much diagnostic inventorying of each individual's capabilities and deficits as the basis for planning and organizing the learning environment.

With the onset of puberty, learning plateaus frequently appear, emotional stability is in flux and new individual learning styles emerge.[1] A marked shift from childhood to a more formal sophisticated cognitive format is characteristic.

The development of various glands and organs in the body causes changes in metabolism and behavior. Basic metabolism declines markedly at this stage; while internal organs such as the heart and lungs grow in size at a rapid pace. Such changes create both physical and emotional problems. For example, students find it difficult to sit still for any length of time. Wise teachers make use of the need for movement and present a variety of activities to prevent physical weariness and emotional restlessness.

The developing ability to perceive and enjoy abstractions motivates students to search for what might be, what could be and what should be. Their idealism is not entirely realistic. They want matters to be as they feel they should be rather than as is. This is confusing to them and to adults. However, further development will help bring idealism closer to realism.

There must be a strong basic skills program and greater emphasis should be placed on the acquisition of skills of: learning how to learn, learning how to think and learning to develop logical processes. Attention should be focused on opportunities which will unleash creative talents; considerable emphasis should be given to a variety of exploratory experiences to provide new interests and to expose students to varied career fields. These experiences are needed by each student in recognizing potential and in developing personal educational and vocational plans.

---

[1]Thomas E. Curtis, Rationale for the Middle School, Impact Journal, NYASCD, 1967-68.

The current statutes and State Board Policies pertaining to instruction require a minimum of 180 days and a five and a half hour day. This translates into a minimal instructional year of 990 hours.

In order to provide for the recommended balanced program and at the same time encourage flexibility and adapting of programming to students' needs and community expectations, the following minimum yearly hours of instruction are established:

Recommended balanced program:

Language Arts & Reading	108 hours
Social Studies	108
Mathematics	108
Science	108
Art	54
Music	54
Industrial Arts	54
Home Economics	54
Health and Physical Education	60
	708 hours of the basic 990 hrs.

This leaves 282 hours of the minimal time for further instruction in the basic electives and additional involvement in other educational experiences.

It is suggested that elective opportunities be provided for both boys and girls in terms of their interests and special abilities.

If any subjects or activities are not scheduled daily for the school year, it is strongly recommended that block time scheduling be used. Art, Health, Home Economics, Industrial Arts and Music should be taught daily or at least four days a week for a semester rather than two or three times per week for a year. This instructional format will do much to sustain good classroom management, a feeling by students that the subjects are important and that they are experiencing ongoing development and accomplishment.

In appendix A are examples of scheduling which range from a traditional format through simple rotation of periods to flexible schedules with many variations. These examples offer suggestions which the staff may consider and adapt to permit the degree of flexibility the students, community and staff are prepared to implement.

The interdisciplinary approach to instruction offers many opportunities for students and teachers to work together closely and effectively. Also, team teaching may help make instruction relevant and a meaningful whole.

ART

RATIONALE:

Every student must have opportunity to organize impressions, reactions and thoughts. This is accomplished in art through visual presentations. For this purpose there should be available for use such tools and materials as paints, brushes, clay, wire, looms, wood. A qualified teacher will help each student develop innate creativity. Art experiences foster creativity and stimulate imagination. The art product becomes a visible sign of success which tends to build self-image.

All young people during their years in school obtain much satisfaction through exploring and experimenting with art materials. Pleasure comes with recognition of increased ability in use of the tools of art for expressing ideas and feelings.

Art is taught in the schools because each student needs help in learning:

to see	to anticipate
to hear	to express
to think	to plan
to feel	to reason

to make decisions
to evaluate.

Art is an universal language common to every age. It speaks to us of the ideas and aspirations of the past. It reflects the present and will speak of us to future generations.

Youth through art can be helped to build a favorable attitude toward self and the environment; to feel a sense of worth among people -- sensitivity to them and the surroundings; and to develop a set of values for the significant. The arts are of keen interest to youth. The results of knowledge and skill development have high visibility, and thus serve youth's need to be accomplished in terms each can evaluate.

In art the student learns to select, to decide and to develop thoughts and feelings in visual forms. He learns to express his emotions in a satisfying manner. He may acquire a marketable skill and learn of many career possibilities.

GOALS AND OBJECTIVES:

Each student will be able to demonstrate knowledge of art elements and a mastery of performance skills in 2 and 3 dimensional design.

Every student should have opportunities to:

- design a collage;
- draw recognizable images;
- letter in two or more alphabetic styles;
- mix colors to use in well composed paintings;
- construct mobiles and stabiles with balance;
- produce textiles of interest by weaving, applique, stitchery and printing;
- model clay, papier-mache, wire;
- compose with camera, develop film and print pictures;
- learn to use the vocabulary of art in critiquing his own and other's art;
- study the art heritage to gain an awareness of basic human values, of other people and places;
- seek art principles in study of such areas as clothing, housing, paintings, sculpture, furniture, automobiles;
- install attractive displays of art.

INSTRUCTIONAL FORMAT:

Individual uniqueness, an outstanding characteristic of young people's art, will have continuing challenge through the setting of problems which require use of imagination in seeking solutions.

To keep the art work exploratory in nature, sufficient space for work, storage and display is essential. Sixty-five square feet per student in the largest work group is recommended.

Classroom space will be organized so relationships of art to daily living, human needs and purposes can be experienced and studied.

Attention to the many careers in art may be focused through use of films, demonstrations by artists, craftsmen, study tours of studios, galleries and museums, viewing of TV and theatre sets, fashion shows and outstanding architecture.

There should be an on-going program of scrounging to collect, to organize, to store and to use scrap materials. Such challenge will aid in building student ability: to see - to become aware - to look for possibilities - to think - to select - to decide.

Art is for everyone. All students should participate in art classes on a regular basis. Scheduling may range from daily class periods through a semester or a year, to a series of mini-courses, each dealing with one material concentratedly for two to six weeks, to open lab privileges for the students with particular interests.

EVALUATION:

Evaluation of art expression is based on teacher-pupil planned goals. This planning, goal setting, creating, practicing and evaluating are learning opportunities. Goals and objectives stated behaviorally will aid students in recognizing achievement and progress. Each may chart personal progress and do a critical review of art products. The teacher can set the tone for critique by pointing to something of worth in each art expression.

BASICS FOR EACH ART ROOM:

floor space for 1200 to 1400 square feet plus a dark room
all walls finished with tack surface
work-storage counter area periphery of room
walk-in storage closet, display boards and cabinets, drawers for student work in process
shelves for display and storage
tables - size for 4 to 6 student workers

chairs and stools
chalkboard 5' x 6'
tools and materials
table looms
inkle looms
floor looms
wedging board
containers for clay
glazes
clay
potter's wheel
kiln
modeling tools
enamel kiln

wood blocks - mallets, chisels, saws, files, sandpaper, oils
linoleum - cutting tools, brayers, inks
silk screen frames - printing inks
scissors - papers
paints - water colors, tempera, acrylic, oil
paint brushes sizes #7 - #12, bristle sizes 1" - 1/2", lettering 1" - 1/8"

chalk
charcoal
conte crayon
crayons
pastels
yarns
burlap
needles
adhesive

tin shears - 18 gauge copper, pewter, foils, wire
metal files
buffers
mount and mat boards
papers - artex, grey bogus, charcoal, vellum, manilla, construction, poster
tissue - sizes 18" x 24", 12" x 18", 9" x 12", and 48" wide project roll
card index listing of resource people and sources of scrap materials found or scrounge materials:

cardboard
boxes
wire
metal scraps
yarns
wood
wallpaper books
upholsterer's scraps
old newpapers
sawdust
felt

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Professional Books

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Karel, Leon C., Avenue to the Arts, A General Arts Text for Secondary Schools, Missouri: Simpson Publishing Co., 1966, 331 pages.

Slides, Films, Filmstrips, Single Concept Loops.

BUSINESS EDUCATION

RATIONALE:

In our industrialized, business-oriented society a great many careers develop from training and background in business education and a rather large percentage of the students will build on the exploratory experiences in business education as they plan careers and identify job opportunities. Current data indicates that business related occupations will offer expanding areas of employment for the future.

Many of the educational programs and career opportunities of interest to Middle/Junior High students have a base in business education, therefore relevant phases of business education should be part of the broad exploratory experiences in which all students participate.

GOALS AND OBJECTIVES:

The students should:

develop typing skills appropriate to their level;
develop consumer skills and knowledge inherent in these basic subjects;
develop knowledge of and interests in occupational clusters associated with these disciplines;
associate developed skills of word and language analysis to skills in other subject areas;
manage their financial affairs in a business-like manner;
develop a more comprehensive and functional understanding of business practices in our free society.

INSTRUCTIONAL FORMAT:

Business education below the high school level is a relatively new concept for most business educators in New Hampshire and consequently considerable work needs to be done to develop the sequences and skills for each level. Data from other states and from the exploratory programs in state indicate this body of knowledge is of high interest and relevant to the educational and career planning needs of early adolescents.

These youths like hands-on learning experiences and so are motivated to learn the skills of typing. Because of this motivation, they have interest in applying the skills in other learning situations such as: syllabication, recognition of prefixes, suffixes and spelling developed in reading and language arts. Thus typing is relevant to the needs of students and aids in other learning.

With the present emphasis on preparing students for the world of work and making their educational experiences relevant, Middle/Junior High students should explore the two major occupational clusters; business and office and marketing and distribution.

Evolving changes in business education indicate the need for much flexibility and the use of actual business opportunities available in the community as the lab for job experiences. Flexibility may be provided through mini-courses, block scheduling, competency-based instruction, open enrollments to attract college-bound students, greater emphasis on reprographics and word processing, extending exploratory experiences and directing more attention to the development of consumer awareness and economic competence.[1]

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Levine, Nathan, Typing for Everyone, Arco Publishing Company, 1971.

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[1]Malsbary, Dean R., "Business Education", NASSP Bulletin January, 1975, Number 387.

CAREER EDUCATION

RATIONALE:

Students need help in acquiring skills for several forms of work. They must have opportunities to examine and experience job requirements and employers' expectancies and recognize the difference between a dead-end job and a job with career possibilities. All youth need help now in learning to adjust to successes and frustrations so they will be prepared to deal with them on the job.

Career education should be an integral part of the total school program K-12 and not a special course. It is also a life-long process. Adults should guard against trying to freeze youth into definite choices too soon.

Career education with its orientation to the world of work is an essential element of each subject involved in the education of all youth. Each teacher has the responsibility to develop information relating to career opportunities associated with that discipline. It is of special interest to adolescents because of their intense concerns about themselves and their future education and careers.

Career education is vitally concerned with helping individuals develop personal work values. The capacity to work at productive activity which holds meaning and satisfaction for the individual is an ultimate goal. Learning to select sequential, short-term goals and following them through to completion is basic to career development.

GOALS AND OBJECTIVES:

Each student should have opportunities to:

- learn the skills necessary to make relevant, mature decisions;
- develop a realistic concept of himself as a worker and as a contributing member of society;
- develop the realization that work is one of the principal instruments for managing, altering or creating environments;
- understand that career opportunities are constantly changing and developing;
- develop understanding and respect for all workers;
- learn that he should understand employers' rules and regulations and that, as an employee, he has a responsibility to support them;
- learn to stay with a job to a satisfactory conclusion.

INSTRUCTIONAL FORMAT:

Many opportunities will be provided throughout the total curriculum for youth to examine occupational possibilities.

Guidance Personnel have a major responsibility for developing career information with all students and to work with the total staff so that students will have help in relating all learning to career opportunities and requirements.

The community is a work laboratory wherein realistic experiences related to the job can be shared by students through contacts with actual practitioners in places of employment.

EVALUATION:

Formal and informal follow-up studies of the educational and work success of graduates and dropouts two, three and five years after leaving the school, provide the best evaluation of Career Information Programs.

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RATIONALE:

When we speak the same language as someone else, that common language becomes a vital tool for unity and understanding at all levels for individuals, families and national groups. There is an urgent need to widen the cultural and linguistic horizons of youth with today's methods of teaching languages so that all students will have opportunity to learn about other people.

A substantial program of language study may be an integral part of the program in middle/junior high schools because students must be able to communicate well in native tongues in the context of the cultures of other peoples. Students must carry the message of the belief that other people of the world have the same inherent right as we have to self-determination and cultural identity.

When a second language is introduced at an early age, instruction is less formal and this provides an enriching, pressure-free situation in which the student can learn the sounds, the basic speech habits and the cultural patterns of different people.

If foreign language instruction has not been given prior to the middle/junior high, it should be introduced at this time and continued until a degree of proficiency is developed. Languages are not mastered in a year or two, so study should be a continuing process.

Introduction of the study of a second language should be time according to this quote:

> "In the context of what we know about how children learn, the general functional connections have been established and fixed for the speech cortex by age 10 or 12; thus, the brain of the twelve-year old is prepared for rapid expansion of the vocabulary of his mother tongue and of other languages. He has also developed a remarkable switch mechanism that enables him to turn from one language to another without confusion."[1]

GOALS AND OBJECTIVES:

The student will learn:

to speak a foreign language with understanding and

[1]Wilde, Penfield, M.D. "The Uncommittee Cortex, The Child's Changing Brain" in The Atlantic Monthly, July, 1964 pp 77-81.

enjoyment;
to listen in order to understand dialogues, conversations and songs in a new language;
to use correct pronunciations, intonation and syllabication;
to communicate through speaking, reading and writing in a foreign language.

The student will develop:

broadened awareness of the mores of other cultures;
deepened understanding of his own cultural and personal values;
understanding of how languages develop and function;
tolerance for diversified modes of life;
sensitivity to pluralistic aspects of his own and others' culture;
linguistic skills in languages.

INSTRUCTIONAL FORMAT:

It is important that foreign language instruction be introduced through listening and speaking. Skills should be developed in the sequence of listening, speaking, reading and writing. The teacher should be proficient in the language and in the audio-lingual approach. It is extremely important that correct speaking skills be developed from the beginning since it is most difficult to change previously established speech patterns.

Thought groups should be stressed rather than individual words or syllables to provide the pleasure of hearing, seeing and understanding another language without reference to one's own.

Daily participation, even if for short periods, serves this age-group better than longer, less frequent periods; also, a variety of instructional approaches such as team teaching, independent study, large group, small group, peer and programmed audio-visual materials should be used to vary the approach.

There should be interchange around foreign language activities and other subjects. Much of the history and culture of people around the world has been examined in social studies. Foreign language study should reenforce and expand this intercultural education.

EVALUATION:

Teacher and student should agree on the degree of proficiency to be attained. Students should demonstrate their awareness

of the mores of other cultures. There should be an observable progression in the development of linguistic skills.

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Services Culturels Francais, Bureau Pedagogique, 972 Fifth Avenue, New York, N. Y.

Simulations in Foreign Language, German, Latin, French, Spanish, Mel Nielsen, State Department of Education, 233 South 10th Street, Lincoln, Nebraska.

ERIC FOCUS REPORTS, $.50 each from Materials Center MLA/ACTFL, 62 Fifth Avenue, New York, N. Y. Various Topics, Request list.

RATIONALE:

The guidance function of the Middle/Junior High School years can be described as a program for assistance to youth. It is through the conflicts of early adolescence that youth are able to form new relationships with peers and adults, develop a positive self-concept and strong sense of personal identity, cope with the beginnings of physical change, clarify values, begin to establish life and career goals, grow in responsibility and independence, and in general, affect a healthy transition from childhood to adolescence. For most, the period produces the first real test of strength to deal with differing sets of values -- those of their parents and those of their peers.

GOALS AND OBJECTIVES:

The student should develop:

- an objective self-appraisal and a positive, healthful self image;
- ability to handle personal crises by talking things out rather than acting out;
- an understanding of the emotional and physical factors of adolescence as they relate to personal maturity, social responsibility and healthful living;
- skills to handle personal concerns in relation to self-control and social maturity;
- a realistic self analysis in relation to self-defeating and self-benefiting behavior;
- willingness to assume responsibilities associated with decision making.

The student should develop:

- concern for acquiring adequate skills and knowledge of self, school and personal assessment and development;
- a sense a school responsibility and a willingness to assist in the promotion of broad learning activities and a happy school environment;
- responsibility for school requirements and citizenship;
- an awareness of career and life goals.

The staff should establish and maintain a program:

- of individual and group assessment;
- of individual and group counseling
- of identification and assistance related to the special needs of students and students with special needs;

to prevent undue emotional stress in the learning environment;
of appropriate student and staff orientation to the guidance program;
to aid parents in being more effective with their children;
of appropriate case and referral procedures;
of communication among home, school and community to develop better understanding of youths' needs.

INSTRUCTIONAL FORMAT:

Guidance personnel are part of the staff team responsible for working with students. Counselors' roles promote work with students in many ways. There will be interaction with large groups in school orientation and topics of interest. Group counseling may be used in varied situations. However, students should feel that they are treated as individuals on a one-to-one basis when personal concerns and confidential information are under consideration.

As instructional strategies are developed in terms of needs of individual students, the counselor provides the relevant information concerning each student in the instructional unit. The counselor acts as the catalyst in matching teacher strengths with the needs and interests of students. Since the activities program is vitally important in the development of the social and recreational skills of this age group, counselors have an extremely important role in providing information so that an appropriate program can be formulated for each student.

The counselor provides the communications' network used to accumulate and relate information concerning every student. The sources are students, parents, teachers, school health services and support personnel. This network must be positive in nature and concerned with opportunities for each student to develop the needed skills in social, physical, intellectual and attitudinal areas of maturation. The counselor is responsible for the follow-through of the decision based on the data of the communications network.

In the Middle/Junior High School, the counselor must be quite visible to students, teachers and parents. This visibility implies openness so that many of the functions can take place in classrooms, cafeteria, library-media centers, the gym and other spots where students gather informally. This format creates a positive, open climate where all students may receive adequate guidance services.

As attention is directed to the basic development needs of Middle/Junior High School students, new patterns of rendering services may be tried. One such program is the Advisor-

Advisee approach in which the counselor works with individual teachers. Each teacher has responsibility for close identification with 20-25 students for a period of time.

Although many of the duties associated with the advisor's role are guidance oriented, the Advisor-Advisee program does not replace the counselor-student-teacher relationship, but rather supplements it.

Current evaluations of counseling and staff functioning indicate the need for expanding roles so counselors and staff may help students deal with all experiences of life. Student development of self-awareness and self-worth is dependent on adult models and involvement with adults on a personal, friendly basis. This means counselor involvement in all aspects of the student's school life. Areas of behavior, attendance, skills development, physical and social development are included in a positive relationship among student, counselor, teachers.

STAFFING:

While teachers and community agency personnel may share in the activities carried out to meet the guidance objectives of the school, a student population of two hundred and fifty to three hundred requires the employment of a full time counselor and a half time guidance secretary. It is generally accepted that employment of additional counselors will be necessary at a ratio of one full time counselor to each three hundred and fifty pupils. Additional full time counselors require additional secretarial support. The amount of secretarial support and paraprofessional staff is determined by the nature of the activities selected to implement the guidance objectives of the school. Optimally, a full time guidance secretary should be employed in a school with three counselors.

PROGRAM:

The following chart is intended to identify the topics which, if included in the curriculum, can lead to full implementation of the guidance function of the middle school. While any topic could be develop at any level, the chart suggests levels where topics may be especially beneficial. The professional members should arrange the ordering and timing of the topics according to specific situations and the individual needs of the students.

School Concerns	Level	5	6	7	8	9
Orientation		X	X	X		
How to Study		X	X	X	X	X
Marks, Tests, Report Cards		X	X			
Self Assessment		X	X	X		
School Activities		X	X			
Student Role in School Operation		X	X			
Promoting a happy school atmosphere		X	X			
Leadership Training				X	X	
School Citizenship			X	X	X	
School Service					X	X
Fighting				X	X	X
Vandalism				X	X	X
Importance of School Record					X	X

Community Concerns	Level	5	6	7	8	9
Responsible Social Behavior		X	X			
Community Problems		X	X	X	X	X
Drug & Other Substance Abuse		X	X	X	X	X
Recreational Activities		X	X			
School-Community Partnership		X	X			
Traveling to School		X	X			
Cultural Values of Groups				X		
Alcoholism				X	X	
Recreational Facilities				X	X	X
Social Responsibility					X	X
Law Enforcement					X	
Equal Opportunities					X	
Leadership Opportunities					X	X
Social Involvement						X

Family Concerns	Level	5	6	7	8	9
Relationships With Parents and Siblings		X	X	X		
Effects of Personal Decisions on Family				X	X	X
Responsibilities at Home		X	X		X	
Planning Family Activities		X	X			
Involving Family in School Activities		X	X	X		
Adhering to Family Routines		X	X	X		
Independence				X	X	X
Family Aspirations				X	X	X
The Generation Gap					X	X

Personal Concerns	Level	5	6	7	8	9
New Friends		X	X			
Self-Control		X	X	X		
Getting Along with Others		X	X	X		

Level	5	6	7	8	9
Cultural Pride	X	X	X		
Leisure Time	X	X	X		
Physical Changes	X	X	X		
Importance of Physical Fitness	X	X			
Emotions	X	X	X		
Managing Money			X	X	X
Self-Defeating and Self-Benefiting Behavior	X	X	X		
Prevention of Drug Abuse	X	X	X	X	X
Prevention of Alcohol Abuse			X	X	X
Prejudice			X	X	X
Crushes			X	X	
Boy-Girl Social Activities			X	X	X
Choice of Friends			X	X	
Extra-Curricular Activities				X	X
Boy-Girl Relationships				X	X
Responsibility for Decisions and Actions				X	X
Social Maturity				X	X
Heredity & Environment					X
Self-Acceptance					X
Maturity and Responsibility					X
Social Conscience					X
Effects of Prejudice					X

Level	5	6	7	8	9
Educational & Career Planning					
Articulation	X				
Understanding School Program	X		X		X
Relation of School Subjects to Careers	X	X	X		
The World of Work	X	X			
Applying School Subjects to Daily Life	X	X	X		
Apportioning Time	X	X			
Attitudes Toward Work	X	X	X		
Current Trends in WOW			X	X	
Jobs in the Future			X	X	X
Relationship of choice of school subjects to careers				X	X
Choice of School Courses				X	X
Marketable Skills					X
Part-Time Jobs					X
Career Ladders					X
Individual Skills & the WOW					X
Changing Courses					X
Summer Work					X
Dropping Out of School					X
Short Term & Long Term Decisions					X

EVALUATION:

The evaluation of Guidance Services is an on-going process and has many indirect facets to consider. In early stages of development, it relates to the development of self-image, self-evaluation and acceptance in and of supportive groups. At immediate stages, the setting of realistic goals, the maximizing of personal resources, the development of educational and vocational goals in terms of one's interest and abilities are indices of an adequate program. In later stages, the percentage of self-motivating and self-directing competent adults indicates the adequacy of the Guidance Services.

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HEALTH EDUCATION

RATIONALE:

Physical and mental well-being are essential for a productive, happy and concerned citizenery. The period of early adolescence is critical in the developmental continuum of each individual and thus the knowledge and attitudes which a good Health Education Program provides is very important for Middle/Junior High School students.

Because of their uneven growth and rapid development, these youths are extremely curious about themselves and their peers. This natural interest in their own development provides considerable self-concern which should be capitalized on by health educators. They need help in understanding their fast changing physical, emotional and social needs. It is during this period that their own personalities and value systems are conditioned and solidified for the rest of their lives; consequently, the challenge to health education is to provide the basic knowledge and engender the formation of attitudes and values which will support the development and maintenance of a personal commitment to one's own optimal health and safe living.

The task is to teach so that youth will formulate positive health attitudes which translate into behaviors which insure optimal personal health and enough concern for all to prevent them from participating in behaviors which might do physical or mental harm to themselves or to others; that they have sufficient knowledge to take positive action in establishing and maintaining healthful lives and supportive environment for themselves and fellow citizens.

GOALS AND OBJECTIVES:

Students should develop:

- a functioning, informed safety consciousness;
- a commitment to maintain a high standard of personal health;
- an understanding of human growth and development;
- healthful attitudes through adequate information on such topics as self-medication, drug use, nutrition, obesity, sex education, alcoholism, venereal disease and mental health;
- knowledge of first aid and acceptance of preventative health practices;
- a participatory interest in the health and safety aspects of their own and others daily activities;
- a critical attitude toward advertising of health services and products;
- a feeling of responsibility for community health;
- willingness to discuss health problems with adults;

the processes of critical thinking in health related areas;
responsibility for family and community health.

INSTRUCTIONAL FORMAT:

Health and safety education should be organized around key concepts with progression from K-12. Instruction should be personalized in terms of student needs. All boys and girls should be involved in regular instruction.

There should be opportunities for elective and mini-courses with strong emphasis on small group discussions. Members of the staff should be designated to plan and implement with the help of teachers in all disciplines, a sequential comprehensive on-going health program. All teachers should have some preparation in health education, a developed awareness of student health needs and a commitment to observe and promote student health. Appropriate community resources should be coordinated and utilized as part of the school and community comprehensive health program and services.

EVALUATION:

The evaluation of the Health program should be the degree to which the objectives are reached by students and staff. That determination would be reached by analysis of the data pertaining to the increase in students' days in school, decrease in student and staff absenteeism, corrected physical disabilities, improved mental health and lack of accidents and injuries to students and staff.

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HEALTH SERVICES

RATIONALE:

Society must assume the obligation to assure each student an educational program in which the aspects of emotional, physical and social health form an integral part of educational achievement and progress toward a mature, self-sustaining adult.

School Health Services seek to promote a high level of well-being for all students and focuses attention on the inter-relationship of physical, mental, social and emotional health.

STAFF:

The health of the Middle/Junior High School student depends largely on the cooperative efforts of the family, the school and the community. Within the school setting, the school nurse, the principal, classroom teachers and school physician play significant roles in developing a workable arrangement for observation and assessment of the students' general health.

School nurses must be capable of contributing positively to understanding and knowledge of human growth and development so that each student employs those practices and attitudes conducive to positive health, happiness and productivity. The school nurse should understand the needs of students, be a willing listener and confidante and be ready with a helping hand to provide professional health assistance. Sensitive and responsive health personnel should be readily accessible when needed.

The school nurse provides protective services and emergency care for the health and safety of students and staff. Health Services' personnel plan an ongoing program of evaluation and make recommendations for changes in the health program as indicated. Student health needs are regularly studied and the necessary resources are utilized to assist each toward optimum health.

SERVICES:

This will include screening for vision, hearing, dental deviations and regularly scheduled height, weight and nutritional assessment. Cumulative health records shall be initiated when the pupil enters school and maintained for all students until termination of school attendance.

The importance and need for schools to keep a substantial and complete health history of each pupil must be emphasized because increased family mobility and economic pressures may prevent parents from keeping adequate health records. A record of childhood diseases and immunization aids in determining health needs and possible learning problems.

The school nurse should coordinate referral services to the family doctor and/or school doctor as indicated by student needs. Also, the nurse should arrange for school physicals and preventive health services within school board policies and in cooperation with the school doctor and community agencies.

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HOME ECONOMICS

RATIONALE:

Students through the study of Home Economics may discover their interests and develop their growing capacities. They learn to organize existing perceptions relevant to individual and family life and gain new insights into human behavior. Through the study of human growth and development, students may be guided toward self-understanding and acceptance. The study of Home Economics enhances the students' abilities to function effectively within their environment as consumers, family members and managers of resources. Boys and girls need the knowledge and skills provided through participation in Home Economics.

GOALS AND OBJECTIVES:

Students will:

make a self-assessment and plan for optimal development;
make the most of personal appearance through good grooming;
maintain safety consciousness that permeates all behavior;
manage personal-interpersonal and peer relationships;
use basic sewing techniques;
will apply decision-making process and management techniques in use of personal resources;
prepare nutritional meals with a variety of foods;

develop personal eating habits to include "the basic seven";
arrange space for living and housing;
plan, select, construct and care for their clothing;
acquire information to identify and evaluate career opportunities;
place fads and popularity into proper perspective in relation to actual needs;
know that heritage and culture do influence modes of living;
demonstrate basic skills and knowledge necessary for baby-sitting, care of siblings and effective family membership.

INSTRUCTIONAL FORMAT:

Home Economics instruction should consist largely of laboratory experiences with appropriate equipment, materials and processes. Boys and girls in Middle/ Junior High Schools should participate in these basic learning opportunities to develop an appreciation of their abilities and interests in understanding of their role as family members and consumers. Career opportunities associated with home economics should be developed as an integral part of the content.

Blocks of time should be provided on a regular basis so that all students can be scheduled consecutively and regularly on a semester or yearly basis. Sometimes, more concentrated involvement with special projects or processes can provide opportunities for students to select areas of special interest and develop individualized goals.

CURRICULUM:

These topics are selected examples of specifics to illustrate some units which may be developed. The level of introduction and the sophistication of the content will be determined by inventorying students needs, interests and previous training.

Personal Relationships

The family unit and its function
Members roles and responsibilities

The individual's role and responsibilities
Changing family life styles
Interacting with other family members
Coping with disagreements in the family
Family adjustments in crises
Influence of family membership upon development of self
Changing role of men and women
Responsibilities of friendships
Influence of peer group on behavior
Interacting with older and younger people
Socially acceptable behavior in boy-girl relationships

Development of Self

Influence of heredity/environment
Physical and emotional concerns of early adolescents
Influences on development of personality
Causes and possible solutions of personal problems
Need of continuous self-appraisal

Consumer Education

Information on labels/recognizing and evaluating
Non-informative & informative advertising
Influence of customs, habits, peers, attitudes on needs and wants
Role responsibilities as a consumer
Characteristics of goods & services which influence choice
Reasons for planned spending & saving
Foods & nutrition

Food and Nutrition

Interpreting and following recipes (terms and measuring techniques)
Preparing food by following a recipe: cereal, snack mix, gelatin or fruit salads, relish plates
Preparing simple meals for family
Storage of perishable foods and staples
Preparing meat by broiling/pan-baking
Safety precautions in the kitchen
Use and care of basic food preparation equipment
Function of food on health and appearance
Effect of food likes and dislikes in food selection/its effect upon health
Influence of fad and fiction about food to health

EVALUATION:

Direct feed-back from the participants in the learning experience provides valuable data. These data may be gathered through direct observation, testing, tasting, etc.

Since most of the programs emphasize attitudinal and living skills, these may be evaluated by school and home over a period of time by observation of behavior in terms of the objectives.

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Choosing Your Goals	Grade 6
Foundations for Fitness	Grade 7
Patterns for Living	Grade 8

A series of books entitled "Dimensions of Health Series". Topics relate to health, family, personal relationships, friends, food, appearance, clothing, role as a consumer, setting goals and career education. Book for Grade 6 is especially adaptable for personal, home and family education.

Home Economics Curriculum Guides

"Developing Curriculum for Middle/Junior High School", Coordinating Council for Occupational Education, Vocational Education, Olympia, Washington.

"Home Economics Curriculum Guide and Administrators Guide to Program Development", Department of Education, Concord, New Hampshire.

INDUSTRIAL ARTS

RATIONALE:

Industrial Arts is an important part of education for young people in our industrial society. It offers opportunities for all students to explore and develop basic understanding of the functioning and interdependence of individuals in our technological society. All need to understand the technical, occupational, recreational, organizational, managerial, social, historical and cultural aspects of our industry and technology. Students can develop competencies through problem-solving learning experiences which are based on skills of planning, designing, constructing and evaluating.

Exploring in industrial arts provides unique and relevant experiences which are particularly needed by early adolescents so that they can inventory and understand their own interests and special abilities related to educational and career plans. These skills and knowledge provide an effective basis for the resourcefulness so necessary to succeed as a producer and consumer.

GOALS AND OBJECTIVES:

Students:

develop a measure of skill in the use of common tools and machines;
discover and develop their talents and interests in related areas;

build vocational skills and interests;
develop problem-solving skills related to materials and processes;
develop respect for work well done at any occupational level;
develop creative talents through the skills and media provided by industrial arts;
develop pride in workmanship, productivity and the ability to build or repair things;
increase resourcefulness as consumers and citizens through critical analysis of advertising and the maintenance of their own values;
develop self-fulfilling, recreational interests and activities;
develop insights and understandings of industry related to one's own economic, political and social structures and functions;
develop a safety consciousness that permeates all activity.

INSTRUCTIONAL FORMAT:

Instructional activities should be scheduled in blocks of time adequate for the laboratory and exploratory characteristics of the program. Attention should be directed to the personal, practical and recreational values of industrial arts.

Evident throughout experiences in industrial arts laboratory should be:

respect for attitudes and practices of safety;
planning;
critical analysis of anticipated activities in relation to learner's capabilities;
knowledge of the use of materials in relation to the product;
cost accounting;
an apparent meaningful use for each experience of the student.

CURRICULUM:

The curriculum should provide both boys and girls opportunities to explore a wide range of processes. In a general lab, several meaningful experiences can be provided simultaneously without designating a specific time for each. The movement from area to area will be indicated by the needs of the student, rather than by an inflexible schedule.

In order for students to understand something of manufacturing, construction, communications and transportation, the processes of planning, designing, organizing, construction,

controlling, servicing and operating for production should be experienced by each student. These processes should involve manufacturing, construction, communications and transportation.

EVALUATION:

Evaluation in Industrial Arts relates directly to the objectives and is fairly easily developed since the degree of the acquisition of skills and knowledge is evident in the product produced.

With the planning of the project, the student determines with the teacher what standards and tolerances are acceptable and thus evaluates at each step as well as the final product.

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LANGUAGE ARTS (Including Reading)

RATIONALE:

Language Arts provide for the development of verbal, aural, visual and non-verbal skills of communication and thus are important for the middle school student. Students acquire skills and knowledge which enable them to function effectively; they are afforded numerous opportunities to deal directly with their own emerging values; they may obtain pleasure and discover career opportunities related to these skills.

A well planned Language Arts program should promote proficiency in reading, writing, speaking and listening. Continuous progress patterns in these skill areas should be established with adequate monitoring of each student. Particular attention should be given to dealing with the identification of individual reading problems. In this technical age, each content area teacher is responsible for teaching those specialized reading and communicative skills particular to the discipline. This includes special vocabulary and comprehension techniques. All content area teachers may seek the assistance of language arts teachers in developing instruction in reading and communicative skills.

At this age, youth is searching for appropriate roles and directions in life. Literature affords numerous opportunities to relate these elements, to express thoughts, challenge ideas and weigh values. By actively testing thoughts and feelings against those of others, the student may arrive at a self-concept which is both valuable and viable.

Students may explore and enrich their interests through a well-planned reading program and be motivated towards more self-direction and continuous learning. They will recognize that different skills are required for understanding and applying principles and knowledge in each of the disciplines.

Language Arts provides opportunities for students to dramatize their thoughts and feelings and to express themselves fully and creatively through use of a variety of media and the theatre arts.

GOALS AND OBJECTIVES:

Students should:

develop verbal, aural and visual communication skills;
increase knowledge of structure and functions of language;

adjust reading rate according to the nature of the material;
develop ability to comprehend various kinds of written material;
develop ability to communicate on paper;
increase ability to evaluate objectively, their own work and that of others;
understand the importance of reading much and well;
develop intellectual curiosity;
develop an ability to draw and support conclusions;
recognize slant, bias and propaganda;
develop respect for the beauty, power and flexibility of the English language.

The student should develop his word perception through study of:

word relationships;
word origin;
prefixes, suffixes and multiple affixes and functions of basic root words.

The student should increase his comprehension skills through practice in:

finding the main idea;
relating details to each other;
evaluating the validity of various sources;
using library and other resources extensively;
skimming for an overview;
interpreting poetic theme;
analyzing plot design.

INSTRUCTIONAL FORMAT:

Students should experience learning situations where they may discover for themselves specifics which lead to generalizations. Ample opportunity should be given for participation in discussions, to read and share with others, to devise class presentations, to write in several literary modes, to present work to others for evaluation and criticism, to consult with teachers on individual progress, to use audio-visual materials and help organize appropriate field trips. Goals are set and should emphasize that students progress at their own rate.

For this age group, it is appropriate to devise learning activities where the student is immediately rewarded for his efforts. This principle of reward is particularly important when dealing with the reluctant learner and can be used advantageously with all students.

A special effort should be made to provide an instructional format which piques the natural curiosity of the student in the middle grades. One way to do this is to organize aspects of language study into thematic units. For example: a unit on "animals" might include some of the humorous animal poems of Ogden Nash, some of the more accessible of T. S. Eliot's cat poems, novels, such as Old Yellar or The Red Pony, true stories, such as, Born Free and essays on the advisability of establishing wildlife preserves. Other themes which might interest students in the middle grades are courage, family relationships, fantasy, mystery, the generation gap, frontiers, adventure and the future. Themes might be developed which explore the past or the nature of New England.

The integration of the study of Language Arts and Reading with other subjects should be encouraged. For example, a theme, such as ecology, might be studied in science, in social sciences and literature.

An attractive variety of print and non-print materials geared to a wide range of interests and abilities should be immediately accessible to encourage reading as a pleasurable experience.

Audio-visual equipment and materials, including tape recorders, film and slide projectors, record players, tapes, television equipment, radio and cameras, should be readily available to students and teachers.

EVALUATION:

Teachers and students should cooperatively formulate objectives and agree on methods of evaluation. In this way, evaluation is supportive of achievement and self-image.

Student evaluation can be achieved by a variety of means. These may include self-evaluation, teacher-evaluation, evaluations of work by other students, group evaluations, teacher-student conferences, parent conferences and community involvement.

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LIBRARY MEDIA CENTER

RATIONALE:

Most people are visually and aurally oriented for communicating and major use of these avenues for learning must be provided to all students for effective learning conditions. This necessitates a fully equipped and staffed library media center which includes books, other forms of print, pictures, films, filmstrips, slides, recordings and tapes. Qualified library media staff participate in curriculum planning and are vitally important in implementing learning and instructional strategies and the uses and evaluation of materials and equipment.

GOALS AND OBJECTIVES:

The student can:

- search out materials by author, title and subject in an integrated cross-media catalog;
- use encyclopedia and other reference tools as definers of his search for information;
- use the Readers' Guide to Periodical Literature, Facts on File Biography Index, Poetry Index and other basic search guides;
- use micro readers.

The student knows:

- that media classification systems locate related subject materials in close proximity.

The student can:

- compile basic cross media bibliographies from his search of resources;
- operate all basic media equipment;
- operate TV cameras and video tape recorders;
- develop short scripts for film production.

The student can produce:

- animated and real-life 8mm films with taped script;
- synchronized slide/tape presentations;

original overhead transparencies for classroom presentation;
story-boards for film production.

The student develops skills in locating and organizing library resources for independent study and self-directed learning in related classroom and personal interest areas of knowledge.

INSTRUCTIONAL FORMAT:

If the student is to learn he must be an active participant in the process.

An effective instructional media program offers a laboratory approach to many sources of information and perspective to textbook use, provides an atmosphere receptive to young people and their natural curiosity and recognizes a variety of learning and teaching styles.

The library media staff instructs students and staff in information gathering and organizing media use and production and appropriate selection and operation of equipment.

Library media skills will be developed through group and individual instruction. Such instruction must be continually adjusted to changes in student and staff needs and the resources available through the library media center. These skills should be taught utilizing the momentum of on-going activities in various fields of interest.

STAFFING:

The media generalist is for:

instruction of students and staff in information gathering and organizing, media use and production, selection processes and operation of equipment;
developing understanding of curricular needs, personal needs and interests needs of students;
participating with faculty and students and adults in curriculum planning and development;
supervision of professional and preparation of paraprofessional personnel on the staff;
development of library media budget.

Aides should have skill to do one or more of the following:

limited reference work, sustain circulation system;
monitor volunteer programs;
maintain media center quarters and inventories.

The staffing should provide one qualified library media generalist for each 500 students or major fraction thereof. Aides should be provided in the ratio of 1 to 250 students.

PAPER MEDIUM:

Books: a basic collection of 6,000 titles or 20 volumes per student, whichever is greater.

Newspapers: minimum of 5, including one local, one state and one national.

Periodicals: minimum of 100 titles plus the relevant index.

Pamphlets, clippings and miscellaneous materials including catalogs, pamphlets, government documents, college, technical schools catalogs, vocational clippings.

Graphic materials: 500 to 1000 prints, posters, photographs, charts, diagrams, graphs.

PLASTIC MEDIUM:

Commercially produced: filmstrips: minimum of 500 titles or three prints per student, whichever is greater.

Slides: 2000 preferable in 2" x 2" format or adaptable to locally owned equipment.

Tape or disc recordings: 1000 titles or 5 per student whichever is greater.

Films: 16mm and 8/super 8mm. Access to a wide variety of well selected, usuable films through regional, district, or other cooperative acquisition program.

Transparencies: 2000 base collection in a wide variety of subjects.

Microfilm: Where microfilm is a research and storage necessity, a minimum of 5 periodical titles covering a 5 year retrospective collection would be basic; the collection should grow according to needs.

LOCAL PRODUCTION MATERIALS:

8/super 8mm film each for 10% of student enrollment.

One 35mm Ecktographic film each for 20% of student enroll ment.

One 0-60 minute cassette each for 30% of student enrollment.

Transparency blanks: minimum of 1000 (reprocessed X-ray film) plus sufficient Diazo materials where equipment for color processing is provided.

Transparency masters should be made available at the local or district level.

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Hicks, Warren B. and Tillin, Alma M., Developing Multi-Media Libraries, N.Y. Bowker, 1970.

Publishing Professional Associations:

Association of Education Communications and Technology, 1201 Sixteenth St., N.W., Washington, D.C. 20036.

American Association of School Libraries, 50 E. Huron St., Chicago, Illinois 60611.

Professional Journals:

Top of the News
School Media Quarterly
Media and Methods
Audio Visual Instruction
School Library Journal

MATHEMATICS

RATIONALE:

To claim to understand today's world is to lay claim to some facility with and understanding of mathematics. From the basic skills needed for social survival to the work of the applied or theoretical mathematician, man is affected by mathematics. Maths ever increasing applications and uses have led to its permeation into almost all facets of work and daily living.

In the middle school, mathematics should be seen as an area of learning that is both fun and useful. It is fun because of the intriguing patterns in the subject. It is useful because it assists us in answering questions and problems relating to our daily living, future job orientation and the understanding of our world.

GOALS AND OBJECTIVES:

A mathematics program for the middle school must be broadly conceived. Although not all students will master the following objectives - and, indeed, no student will master all of them - the program should consider the areas of numbers, operations, geometry, statistics and graphs, probability, measurement, problem solving and functions.

In particular, students should develop basic skills and knowledge to:

add, subtract, multiply and divide whole numbers, fractions, decimals and integers;
recognize and apply the commutative, associative and distributive properties of number systems;
use the concepts of ratio, proportion and percent;
make approximate calculations;
explore the use of electronic calculators and computors;
estimate, work with large numbers and scientific notation and explore very small numbers;

read, model, solve and answer mathematic problems, especially those arising from their own interests;
use simple logic in solving problems involving logical inferences;
measure in both the metric and english system with increasing emphasis on metric measures;
use the properties of geometric figures and the concepts of congruence and similarity;
use function rules and graphs, e.g., direct variation;
apply the principles of simple probability and statistics;
construct, read and interpret graphs;
appreciate the fun and beauty of mathematics;
know the historical and cultural developments of mathematics;
apply mathematics to problems in personal economics of concern to the student.

INSTRUCTIONAL FORMAT:

A variety of techniques can and should be used to present mathematics to students in grades 5-8. No one set of methods is to be preferred. It is the teacher's ability to convey joy and interest in the subject matter that truly motivates students. Thus, the staff's decision, consistent with the school's philosophy, should guide the selection of methods. Similarly, grouping procedures should provide for maximum flexibility within specific situations.

Activities, laboratory experiences, textbooks, skill exercises, games and interdisciplinary problems should all be integrated into the program. A wealth of manipulative devices should be available to students. These students like to do things. Indeed, students in grades 7 and 8 have been often characterized as "engineers". Activity centered approaches generally work well with them. Recent reports suggest that a problem-solving format should be used extensively. This approach provides those experiences needed by the student as he seeks to develop the higher cognitive skills of analysis and synthesis. The selected problems can be drawn from several areas outside of mathematics, as well as from the subject itself. Problems chosen as a result of student interest will provide a meaningful and genuine way to individualize instruction.

Organizational patterns and methods of teaching require a variety of scheduling allocations. Time recommendations should be interpreted broadly and not inhibit experimental approaches and interdisciplinary activities.

BASIC RESOURCES WHICH EACH CLASSROOM SHOULD HAVE:

In addition to standard classroom equipment, mathematics teachers should be provided measuring tools, metric and

english; geometric models, 2 and 3 dimensional; inch blocks or other counting devices; spinners; dice; graph paper and materials with which students can construct models.

Likewise, a long range plan should be developed for the purchase of all materials needed for an optimum program. Some items, such as games, activity cards, and less-often-used models, could be in a central collection and serve all classes. Many of these items may be borrowed from other disciplines; for instance metric weights and measures from science; globes, maps and grids from social studies.

EVALUATION:

Evaluation of instruction has been called the quality control of the educational program. It is a means by which the quality of our mathematics programs can be constantly improved.

Of the many roles of evaluation, one of the most important is the improvement of instruction. It assists us in determining the effectiveness of the techniques, materials and content of our teaching. Thus, evaluation is a basis for building curriculum and selecting methods of teaching that will develop the desired mathematical competence.

Another important role of evaluation is the provision of data as a basis for improving the progress of individual students. It can be used to determine readiness for instruction, diagnose weaknesses and strengths and locate difficulties or superior mental capacities.

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NOTE: The NCTM brochure, "Current Publications", lists many other valuable references. The brochure is free on request.

RATIONALE:

Music, involving both the affective and cognitive, provides essential experiences for this age group. Since artistic expression emphasizes individual worth, music can be an avenue of communication between teacher and student and among peers.

Activity is a basic human need especially for these young people. Music, through opportunities for singing, playing, responding to rhythm, composing and actively listening, is most worthwhile. While in-depth experiences are provided for students who come with keen interest and developed ability, every student should be involved in singing, playing and listening. Students should have use of an instrument for class participation and basic work on a regular basis.

It is important that content center around musical sound through all aspects of musical experiences: singing, playing, listening, creating, improvising, composing and responding to rhythm.

GOALS AND OBJECTIVES:

Every student should have opportunities to:

show enjoyment in communicating through music;
listen actively with guided direction to a variety of types and styles of music;
sing two, three or four part music;
play simple melodies on an instrument of choice;
play chords on autoharps, uke, guitar, piano;
identify by sound some of the works of recognized composers;
improvise melody, harmony and rhythm patterns;
notate music heard or composed;
respond to rhythms;

acquire and use a vocabulary of terms used in music;
identify career opportunities;
construct simple instruments.

Over all objectives are to have a majority of the students increase eagerness to acquire more knowledge and skill, develop ability to communicate as sender and receiver and as participant and listener.

Students need an environment where they may develop a love and respect for the art of music while deepening aesthetic awareness and enjoyment of sound.

INSTRUCTIONAL FORMAT:

Singing is an accepted part of the expectations of learning music. Care must be exercised in developing the music instrument within each human: the voice. There should be short periods of study of varied choral music in regular class meetings, longer periods in select choral groups and in assembly singing. There should be opportunities to perform individually, in unison or in parts singing. Selections should be made from an assortment of styles: popular, folk, rock, jazz, ethnic and art songs. Encouragement and praise persuade and motivate.

Instrumental activities in the classroom will assure total participation. Melody and rhythm instruments may be used: bells, drums, guitars, autoharps, as well as the usual instruments of orchestra and band. Each student should have access to a recorder or like instrument for classroom work, because to learn about sound students must experience sound and learn to listen with discernment. Opportunities should be provided to compose and to improvise in rhythm, melody and harmony. Individual and small group learning labs situations make this possible.

The cognitive domain is challenged as students learn the elements of music, study current types and styles and acquire a usable vocabulary of musical terms. Knowledge of the fundamentals of music may be promoted through problems and games.

Both mind and emotion are caught up in learning-to-listen opportunities. Students should be provided with many short periods of listening-with-purpose, to themselves, their peers and to musicians representing a variety of periods, styles and countries with some attention to the heritage.

A unified arts approach will promote flexibility. This requires a block of time and careful planning by teachers who are committed to an interdisciplinary way where perspectives may be given to a concept and the learner with his needs remains in focus, rather than a subject being glorified.

Facts and skills can be taught through youths' interests, through opportunities for self-selected projects, in the planning process and the procedures of independent study.

EVALUATION:

The goals and objectives are stated here for ease of interpretation into behavioral terms. Students can demonstrate observable growth as consumers and performers of music.

TOOLS:

Supplies and equipment for music in adequate space to move about readily from one learning area to another:

- Piano
- Autoharp
- Melody instruments: guitar, xylophone, harmonica
- Rhythm instruments: marimba, recorder, resonator bells, drums, tambourines
- Band instruments
- String instruments
- Lab equipment for
  - piano lab
  - guitar lab
  - electronic lab
- Stereo component system
- Projectors
- Films, filmstrips, slides
- Records
- Tape recorders
- Recordings and tapes
- TV receiver
- AM-FM radio
- Cassettes
- Chalk board
- Bulletin boards
- Chairs
- Music stands
- Screen
- Portable risers
- Textbooks
- Reference books
- Sheet music
- Staff liner

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PHYSICAL EDUCATION

RATIONALE:

Physical Education is important because each student needs maximal opportunities for involvement in situations calling for mental, motor and emotional responses and development. Every person needs relevant skills and knowledge which will result in desirable modifications in behavior and attitudes which will result in optimal personal health and safe living.

A good physical education program contributes to the development of self-directed, self-reliant and fully functioning individuals.

Physical Education is concerned with efficient body management in a variety of movement situations both functional and expressive. The divergent needs of all students are served by this program.

GOALS AND OBJECTIVES:

All students should:

be committed to the development and maintenance of physical and mental health for self and others;
have basic knowledge of body function necessary for optimal development;
develop motor skills basic to functioning as a coordinated and integrated person;
be provided with movement experiences based on individually identified needs;
participate in planned physical education experiences and daily follow-up activities;
develop safety consciousness and practices;
respect one who has ordinary and special resources;
gain in self-understanding and acceptance;
develop leadership skills and accept the implied responsibilities;
develop participatory lifetime interests and activities;
accept success and failure in individual and team efforts;
experience and develop creative, expressive activities related to dance, art and communication.

INSTRUCTIONAL FORMAT:

To deal effectively with the whole student, many styles of teaching must be used. These include both teacher and student-directed learning. Learning must be personalized and concerned with the cognitive and affective domains; therefore, a problem-solving teaching strategy is vital. Innovative use of com-

munity resources, audio-visual materials, individual, large and small group instruction, peer teaching and inter-disciplinary approaches should be used. Extensive opportunities should be provided for participation in organized intramurals such as play days and sports days. These should be designed to serve the needs of all students and be related to the class instruction.

Curricular content should be so organized that levels of learning in attitudes, understandings and skills are recognized and can take place in a sequential and developmental arrangement. With this age group emphasis should be on the basic physical education and intramural programs. If an interscholastic program is considered, it should be developed only after a comprehensive intramural program is available to all students.

Formal physical education classes should be scheduled a minimum of two or three days per week. Informal and self-directing activities should supplement the formal periods to ensure daily involvement by all students.

At the lower level of the Middle/Junior High School a continuation of movement education of the primary level should be implemented. If previous physical education opportunities have not been provided, much emphasis must be given to basic movement skills and understanding time, force, space and flow as it relates to movement.

Co-educational activities should be used to facilitate the emotional and social development of both sexes. Much emphasis should be placed on trust, assisting and sharing.

At the upper level, physical education on a full year basis should include a series of mini-courses which will offer an introduction to many sports and activities.

Programs should include:

games of low organization;
developmental activities;
safety and health information and practices;
preliminary and leadup games and activities;
individual and dual activities;
self-testing activities;
dance and rhythmic activities;
aquatics;
track and field events;
outdoor education-recreation;
gymnastics;
team games;
life-time activities;

It is essential that physical education personnel establish a progressive program from K-12 that reflects the philosophy of the school and the community. The growth and development of the student must be the prime focus. There is much that should be done beyond class times through contractual agreements and independent study. Classroom teachers and the physical education specialist should work closely to ensure that all students' physical needs are met daily.

A minimum of 125 square feet per student in the lower, middle and upper secondary school should be available for physical education. Adaptability to purpose favors locating these facilities adjacent to playing fields on the ground floor and away from academic classrooms. Corridor gates and separate entrances will secure this area from other parts of the school building. Thus, the use by the community is facilitated.

Locker room and shower facilities should be provided. Outdoor space should be adequate and readily adjacent to provide the necessary space for a variety of school and recreational programs.

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SAFETY EDUCATION

RATIONALE:

The behavior of early adolescents is typified by sudden spurts of energy. They jump into action, try new things and often outdo themselves and others. Their enthusiasm mandates that appropriate education be given to develop their safety consciousness.

To be effective in the subtle process of really influencing behavior and attitudes, safety education must be an on-going, comprehensive program from birth to demise. Especially in our technological world, students must be equipped with the know-how to live safely in their chang-ing, mobile, machine and chemically-loaded environment.

INSTRUCTIONAL FORMAT:

Safety is a way of life and its implementation requires a comprehensive program integrated into all learning activities and courses. Students must develop the skills, attitudes and knowledge of laws and regulations to pro-tect themselves and their fellow citizens from injury, illness and premature death. They need knowledge of safety laws and a commitment to live by them so that they take no undue risks with their own well-being or that of others.

The development and implementation of this comprehensive Safety Program requires active participation of all school personnel and the mobilization of community resources. Efforts of agencies which need to be coordinated include safety councils, automobile clubs, civil defense officials, health organizations, 4-H clubs, youth organizations, building codes enforcement personnel, police departments, fire prevention and pollution control agencies, and especially parents.

Youth need continued involvement in analyzing the cause and effect relationships in what happens to them throughout their environment. Education should challenge the false concept that accidents are unavoidable and part of a natural sequence of events. Rather youth must realize that they do influence the chain of events in their lives and can redirect them to positive results.

Special units should be provided at the elementary level dealing with areas and items which have been identified as hazardous in the students' home, school and community.

At the Middle/Junior High School level renewed emphasis must be directed towards safety consciousness to facilitate the

students' adjusting adequately to changes in their own behavior and environment. Their increased involvement in a complicated, gadget-oriented world coupled with emerging social and economic decisions necessitates special attention to safety education at this level.

CURRICULUM:

The charted concepts are selected examples of specific topics which may be developed as components of a comprehensive, safety education program. The level of student involvement should be determined by inventorying student needs as reflected in causes of accidents, illnesses and deaths in their homes, schools and communities.

Some Areas and Items to be Analyzed as a Basis of Safety Education.

The Home:
- recreational areas
- storage places
- stairs and steps
- electric lines, generators, etc.
- medicine cabinets
- heating areas
- workshops
- swimming pools
- parking areas
- power equipment

Substances to be recognized as potentially dangerous and treated accordingly:
- chemicals
- explosives
- poisions
- alcohol - drugs
- electricity
- gasoline
- power equipment
- trash

Places where accidents often happen:
- the home - closets, cabinets
- construction sites
- caves, wells, streams
- alleys
- in back of vehicles
- intersections
- traffic areas
- power plants
- parking areas
- storage areas

Hazardous things:
- alcohol
- fire
- excessive speed
- explosive decives
- drugs
- power machinery
- medicine
- poisonous plants
- insects and snakes
- unknown waters
- old buildings
- wild animals
- vehicles

Hazardous Ideas:
- "I'll fix it later"
- "You're Chicken"
- "Accidents just happen"
- "I dare you"
- "That won't happen to me"
- "I can do it better than you"
- "This time won't count"
- "Just once won't do any harm"

Special Areas of Safety Education of Concern to Early Adolescents:
- water safety
- recreational areas
- hunter safety
- driver education
- hazardous jobs and employment restrictions
- venereal diseases
- smoking, alcohol and narcotics
- recreational vehicles
- chemicals
- electricity
- power equipment
- mountain climbing
- wireless communications

EVALUATION:

The evaluation of safety education must be its computed effect on the number and severity of accidents in the schools and the community. Since the topics selected for the program were based on student needs as analyzed from accidents and hazards in the home, school, community, that tabulation forms the basis for evaluating changes in the occurance and severity of accidents during the span of the program. The evaluation report should be a cooperative compilation of accident reports from all the agencies having safety and health responsibilities in the community.

Total community awareness and involvement in the combined efforts to produce a safe community should be the key measure of effectiveness of safety educational programs.

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"Bicycle Accidents to School Aged Children," National Safety Council.

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"School Child Traffic Safety Programs"- Conn. Safety Commission, State Office Building, Hartford, Conn.

Sportsmanlike Driving, 7th Edition (1975), McGraw-Hill and American Auto Association.

Let's Drive Right, 5th Edition, Scott, Foresman - Oakland, New Jersey.

Beginning Rider Course, National Motorcycle Safety Foundation, Linthiam, Md.

School Bus Driver's Course, U.S. Department of Transportation & Dunlap Association, New Britian, Conn.

Films

State Department of Education, 64 North Main Street, Concord, New Hampshire 03301 has the following films available:

Elementary Level - Bicycles, Pedestrian, Schoolbus.

The Middle Grade Level - Bicycles, Pedestrian, Schoolbus, Alcohol.

Secondary Level - Driver Education, Motorcycles, Bicycles, Pedestrian, Schoolbus, Alcohol.

These films and materials are available to teachers to enrich their teachings in the area of safety. If resource people are also needed, please feel free to contact our office at 64 North Main Street, Concord, New Hampshire by mail or telephone - 271-3779.

RATIONALE:

An effective science program is important to the development of Middle/Junior High School students. It adds to the students' store of knowledge about themselves, their environment and their world. It gives students insight into the structure of science, thus enabling them to learn key concepts, develop conceptual schemes and relate them to each other.

Science plays an important role by helping students learn the nature of scientific inquiry and the key processes of the scientist. A program based on inquiry and process encourages students to develop understanding instead of just memorizing facts; it challenges students to think critically as they acquire scientific skills and attitudes.

In sum, a successful science program prepares students to evaluate data, test hypotheses, arrive at valid conclusions and make intelligent decisions about personal problems and societal issues.

GOALS AND OBJECTIVES:

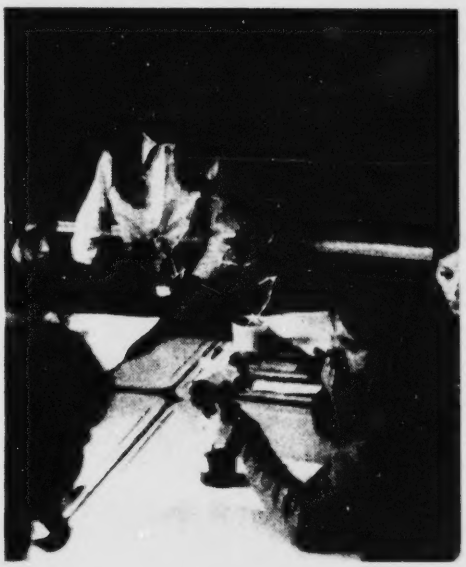
A science program for the Middle/Junior High School must be broadly conceived and structured as part of a continuous K-12 science curriculum. For example, students cannot develop the more complex skills without first developing such basic skills as observing and classifying.

At this level students should develop the skills that will enable them to:

- formulate hypotheses;
- make operational definitions;
- control and manipulate variables;
- experiment;
- interpret data;
- formulate models.

They should develop:

- knowledge and understanding based on logic;



attitudes, values and appreciations based on reason;
the ability and the willingness to suspend judgment;
intellectual curiosity;
a respect for intellectual honesty;
a sense of responsibility;
an appreciation of their scientific heritage;
an appreciation of conceptual schemes such as the non-authoritarian acceptance of the atomic theory, the laws of conservation of matter and energy and ecological principles.

INSTRUCTIONAL FORMAT:

The science program in the Middle/Junior High School must be a well planned part of a K-12 program with adequate scope and well-developed sequence. It should be consistent with the Middle/Junior High School philosophy and be clearly outlined in a local curriculum guide. This guide should include a statement of goals and objectives, an outline of the areas to be studied at each level, a statement of methods and techniques of instruction and appropriate evaluation elements to determine student growth and program effectiveness. It may include a list of texts, media, supplies and equipment.

Science teaching and learning are most effective when instruction begins with a problem that arouses the curiosity and interest of the student. Once motivated, students should become involved with a wide variety of learning activities and experiences designed to meet their individual differences. They should have opportunities to experiment, to read, give reports, participate in discussions, take field trips, consult resource persons, use varied instructional media, research and work on projects. Students and teachers should use all relevant resources of the school and the community.

In the lower level of the Middle/Junior High School experiences and examples in the real world should be used to develop scientific processes and attitudes. Content may be selected from life science, physical science, earth science and astronomy. Studies can be made of the ecology of the local environment, health and personal hygiene, life cycles, relative motion, pendulums, pond life, batteries, bulbs, magnets and rocks.

The science program in the upper level of the Middle/Junior High School is a crucial bridge between the process-emphasizing, content-minimizing science offerings of the elementary school and the content-emphasizing, process-polishing programs of the high school. The program should stress the continued development of curiosity, the necessity of making accurate observations, the importance of being open-minded, the value of experimentation and the realiza-

tion that all conclusions are tentative and subject to modification based on new data.

Several options are available from which to organize the upper level science program. One option is an individual or small group involvement that utilizes a self-paced, activity-centered, sequential set of materials. This program has a flow of content from physics to chemistry to biology and from the fundamental to the applied.

Another option would expose the student to each of the four science areas, earth science, physics, chemistry and biology - ecology. Blocks of instruction may be taken from several texts and used in conjunction with a wide variety of teacher or commercially prepared supplemental materials.

A third option would provide the upper level student with the equivalent of one year of any two of the three sciences, biology, physical or earth science.

Daily planning by the teacher is essential if successful teaching and learning is to take place in and out of the classroom.

Activities should provide opportunities to manipulate actual objects and to deal with abstractions. No one teaching method is to be preferred; teachers should select a variety of techniques appropriate for each learning situation. Science concepts may be learned and applied in other subject areas with interdisciplinary planning.

Students should be encouraged to tackle real and practical problems in which they can make substantial headway. The practicality of seeking solutions to real problems motivates the student to try it and see if it works. This provides one criterion for judging the correctness of hypotheses and conclusions. A study of community-based problems can encourage students to consider the real impact of decisions on the environment.

Different organizational structures and methods of teaching may require varied scheduling patterns. Science instruction should be provided regularly.

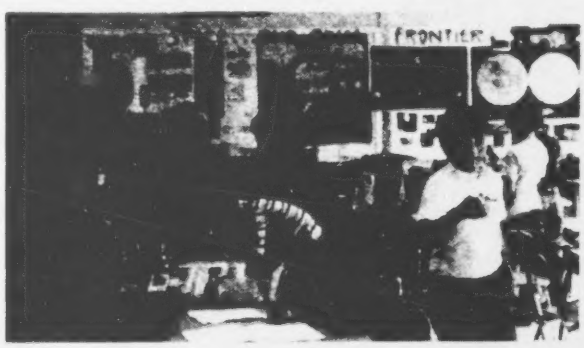
BASIC RESOURCES:

Each elementary school classroom should be equipped with items which are selected to arouse curiosity and provide opportunities for observation. Aquariums, terrariums, display space for specimens and items collected by students serve these purposes well. Classrooms used for science activities must

be equipped with chemical sinks, fire extinguishers, fire blankets and first aid kits. If dangerous or corrosive chemicals are to be used, students must be provided with safety goggles and the classroom should be equipped with shower and eye bath facilities.

A good science program is built with carefully selected materials which are determined by the students engaged in learning activities. Inexpensive supplies and equipment are usually used in the Middle/Junior High School science program. Such materials increase opportunities for each student to experiment individually and in small groups. Homemade or improvised equipment can be used; however, sufficient commercial materials must be purchased to guarantee an effective program.

At a minimum, each Middle/Junior High School classroom should have tables for conducting experiments and demonstrations. Electrical outlets and a suitable supply of heat and water should be provided. Facilities should provide for classroom storage of supplies and equipment. Each science area should have its own locked storage for delicate and dangerous materials.



EVALUATION:

Evaluation should be directly related to the objectives of the science program and should measure the degree to which each student has attained these objectives. Evaluation results should be used to rate the student, measure the effectiveness of the science program and to modify as needed.

Several techniques must be used for successful evaluation. Daily observation should be a major part of evaluation and can be used to determine if the student has internalized a specific concept, developed good process skills and employs sound scientific attitudes. The written test can be used to measure facts and concept understanding. Tests should

include carefully designed application problems to measure the degree to which the science program has developed a student's thinking. Another technique used to measure what students can do with what they know is to present each student with a hands-on activity the solution of which incorporates acquired knowledge. This technique can also be used to measure the extent to which a student has developed various process skills.

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Journals

"The Science Teacher" (subscription price $15.00)

"Science and Children" (subscription price $8.00)

Both Available From:
National Science Teachers Association
1201 Sixteenth Street, N. W.
Washington, D. C. 20036

"The Journal of Environmental Education" (subcription price $10.00)

Available From:
Dembar Education Research Services
Box 1605
Madison, Wisconsin 53701

SOCIAL STUDIES

RATIONALE:

A prime purpose of social studies education is the development of a more rational society. Students need to learn about the behavior of Man over the ages in diverse cultural and geographic settings. They should learn about themselves and others who are similar or different. They must develop the skills of critical thinking and the will to employ logic in the making of decisions. They should understand and be committed to the institutions and values that sustain our free society.

Knowledge, skills and values, the three essentials of social studies education, are developed by carefully selecting educational objectives and by utilizing appropriate methodology, materials and evaluation techniques. Programs should be active, relevant and flexible, yet sufficiently structured to guide and support the maturing student.

History, the Humanities and the Social Sciences combined with the issues of the world and the experiences of the individual serve as the content of social studies education.

GOALS AND OBJECTIVES:

Students should develop:

- competencies in the acquisition and utilization of information to clarify issues and solve problems;
- skills in critical thinking and decision-making;
- a positive self-concept;
- skills in group participation and inter-personal relations;
- skills in the use and interpretation of maps, globes, charts, photographs and other visuals.

Students should learn how to:

- expand their concepts of the world from home, state, nation and hemisphere to global awareness;
- apply their increasing knowledge of our country's heritage to the present and future;
- apply the concepts and analytical tools of the social sciences in the examination of societal issues;
- participate effectively in democratic processes.

INSTRUCTIONAL FORMAT:

There is no one recommended method of instruction that will suffice. Methods must be matched to educational objectives, student abilities and interests. For example, lecturing on the value of consensus-making may be as inappropriate

as utilizing the inquiry approach in locating the continent of Australia. Heuristic games may be misused if students are not prepared for these activities.

Social Studies instruction should provide opportunities for the development of group skills and accomplishments, encourage divergent thinking, provide models of logic and illustrate, by example, the characteristics of a democracy.

Students must be active in learning. They need to visit the community and be visited by members of the community. Thus, the instructor needs to be aware of local and regional resources and be skillful in helping students organize a variety of school and community experiences.

The wide range of interest and abilities characteristic of this age group requires instruction that provides for individuality and is structured to give guidance and support when needed. Classroom activities should provide opportunities for the individual to seek personal goals in a variety of ways.

Contemporary social studies instruction requires a multiplicity of methods. Sometimes the teacher is a designer of information, a questioner of assumptions and a guide in learning; the student gathers information from books, conversations, films and through experiences as a group leader, a follower, interviewer or evaluator.

CITIZENSHIP EDUCATION:

Traditionally, social studies has been assigned a leadership role in citizenship education. While the total environment, comprised of home, community and school shares this responsibility, social studies educators are expected to initiate, maintain and nurture education for citizenship. New Hampshire Law endorses this assignment in Revised Statutes Annotated 189:11.

The social studies classroom must be a forum where knowledge and logic permit a careful examination of the issues, experiences and perspectives of a pluralistic democracy.

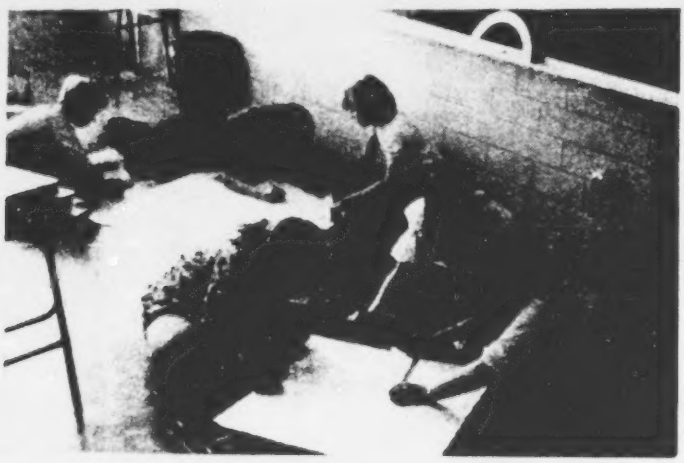
The nature and operation of our systems of government, the foundation of law and economics, the relationships between the individual and the government, the characteristics of societies and our national and international priorities are representative components of citizenship education.

Students learn the mechanics of voting, the skills of compromising, the importance of individual resolution, the rights of free speech and the responsibilities of citizenship by practical experiences and classroom instruction. Citizenship

education continues throughout the years of formal schooling and adult life.

The continuing struggle to attain our national goals and a deepening interest in our heritage foster the growth of patriotism.

Citizenship education, like environmental and intergroup education, is essentially interdisciplinary and should permeate the total curriculum and environment of the school. Student government, special interest clubs, community projects and events, athletics and assemblies are learning laboratories in citizenship education. Civic education can not be confined to the classroom or to time allotments assigned to social studies education.



CURRICULUM:

There are many acceptable ways to organize a social studies curriculum. Organization is necessary in order to avoid repetition, gaps in instruction and an imbalance in methods or content. Some commonly used patterns of organization are:

The Thematic or Topical Approach

The thematic or topical approach is a traditional one. This approach usually utilizes the concept of the expanding environment and allows selection of specific units within a range of alternatives. Please refer to the appendix for "A Collection and Review of Unit Topics by Grade Level".

The Concept/Generalization Approach

Concepts are broad ideas with wide transferability when further defined by a series of generalizations. They may be presented in a singular or in a functional relationship,

e.g., "conflict and change", "society and tradition", "law and the individual", "national resources and technology".

Generalizations, statements of relationships that are drawn from and related to these concepts, further organize the curriculum, e.g., "Natural resource may be divided into the replaceable and the irreplaceable".

Often generalization/concepts are restated each year with increasing complexity and sophistication, e.g., at the kindergarten level "trees provide us with paper and wood products". At Grade Six - "As a result of other increasing scientific developments and modern technical discoveries, the world's resources are constantly being replaced".

The attempt to define the nature and implications of the concepts/generalizations serves as the focus for organizing the sub-components, themes, topics and units of study.

The Skills Continuum Approach:

In this approach a collection of broadly defined skills are used to organize and validate the curriculum. Instruction and evaluation are designed so that students may progress along an established continuum in a graded or non-graded manner. Units of study are selected in order to develop and maintain individual or group skills. One such continuum was prepared by the Wisconsin Department of Education. See appendix "Skills in Social Studies Education".

EVALUATION:

Social Studies evaluation should recognize and reward the efforts and achievements of groups as well as individuals.

Evaluation should be directly related to the nature of the educational objectives; if the objective is process oriented, then the evaluation should also focus on process.

Evaluation should extend beyond grading and reporting to parents and include the diagnosing of student needs and interests. These data can be used to evaluate and redesign an instructional program.

Any evaluation of skill attainment is best made in the context of its application to realistic issues and problems.

Attitudes and values can be inventoried in a responsible and professional manner. It is important to know how students feel about the rights and responsibilities of citizens and of the nations.

BASIC RESOURCES:

1. Collections of Data: textbooks, periodicals, charts, maps, newspapers, documents, globes, audio-visual materials, town reports, the city's seal, human resources.

2. Community Resources: the local historian, the neighborhood business, the city hall, cemetaries, the city planner, members of the community.

3. Process Aids: case studies, heuristic games, role playing, debates, group building activities, committee work.

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SERVICES FOR EDUCATIONALLY HANDICAPPED STUDENTS

RATIONALE:

An educationally handicapped student is any student at any age who fails to function appropriately in his current environment. Every student, regardless of his intelluctual capacity, emotional condition, or physical capability, should be provided with a successful, satisfying educational experience.

GOALS AND OBJECTIVES:

The curriculum of the Middle/Junior High School will be appropriately modified so as to allow each educationally handicapped student to successfully function in the least restrictive alternative environment, defined as follows: procedures to insure that to the maximum extent appropriate, handicapped children are educated with children who are not handicapped, and that special classes, separate schooling, or other removal of handicapped children from regular educational environments occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services can not be achieved satisfactorily.

INSTRUCTIONAL FORMAT:

All staff members on the school faculty have a responsibility to insure the successful integration into a regular program for students who have intellectual, emotional or physical disabilities that prevent them from full participation.

Middle/Junior high school administrators have the responsibility to make available to school staff consultation and services required to assist them in providing appropriate program modifications to meet the needs of the students.

EVALUATION:

In all curriculum areas, educationally handicapped students should understand and where possible, help formulate measurable performance objectives for their work as well as methods by which it may be evaluated. Evaluation should be a vehicle by which the student acquires information about and acceptance of himself. Above all, it should be an on-going process that insures successful, satisfactory and meaningful educational experience as measured by the official documentation of the school.

Evaluation of educationally handicapped children can be achieved in a variety of ways. These could include self-evaluation, evaluation worked out by other students, group evaluations, teacher-student conferences and parent conferences.

For purposes of clarifying this section reference is made to New Hampshire Statutes Annotated and to policies of the State Board of Education.

STAFFING

Staff members of the Middle/Junior High School should be hired because they want to work with early adolescents. They should understand the special needs of this age and have professional preparation to teach at this level. The staff should have the skills to assess each student's progress and have some degree of expertise to diagnose and remediate deterents to learning among students. Each should possess skills to plan relevant learning activities through a variety of instructional approaches for all students.

Middle/Junior High School students need strong adult models, both male and female, with whom they can identify and relate. They need teachers who extend warmth and understanding to each individual to the degree needed and, at the same time, help each student maintain and develop personal responsibility and achievement.

A most important consideration in staffing Middle/Junior High Schools is the selection of the educational leader of the school, the principal. He must be skillful in working with students, teachers, parents and leaders in the community; he should be a strong, wholesome model for the students as well as a bulwark of strength and support for the challenged staff. He must build support among parents and community leaders for sufficient resources for a viable, learning environment. The principal must keep the staff oriented to students' needs and be able to provide the basic structure which can maintain direction in a flexible student-centered program.

Since it is difficult to find training programs oriented to this level, the principal must provide the needed in-service programs and resources for the staff to enable them to better meet student needs.

Students, staff and parents must be able to sense the principal's concern for each and believe that fairness, purpose and accomplishment are the rules of the game. All should recognize that work and achievement are possible along with considerable fun and flexibility.

Everyone should place a high priority on establishing and maintaining open and frequent communications as the basis for providing the variety of resources and for changing the tempo of learning activities to motivate maximal development of each student.

A PHILOSOPHY FOR MIDDLE/JUNIOR HIGH SCHOOLS

We commit ourselves to the ideals of the worth and dignity of each individual as the greatest resource of our Nation and the fact that the individual is the basic element in our educational and social system.

We believe the educational experiences of early adolescents, as with boys and girls of any level, should be determined by the individual needs and by the needs of the society in which they are to function.

We commit ourselves to an understanding of the characteristics of adolescence and the accompanying physical, mental and emotional changes which affect the development of middle/junior high school pupils.

We believe the great variety of student needs in the middle/junior high school years demands a comparable variety of organizational patterns and course opportunities. Within these organizational provisions, the staff should take advantage of the natural curiosity and flexibility of this age group in developing programs which will promote the realization of individual potentials.

We believe that emphasis should be placed on the hiring of personnel whose training and background have provided them with a special orientation to this level.

We believe that available evidence warrants that the organization of the middle/junior high be a distinct administrative unit. If this cannot be accomplished physically with separate schools, then the concept of the middle/junior high school should be evident in personnel, curricular and extra-curricular practices. This concept is also necessitated by the range and variety in the physical, social, intellectual and emotional maturity of its students which create an intensity of needs which may not have been so common to them while in elementary or senior high schools.

We believe an understanding of the early adolescent is basic to a philosophy for the middle years. Such a youth, however, somewhat defies description because of the diversity of physical, social, intellectual and emotional maturity previously mentioned. To many his existence is transitional, but to him the "me" and the "now" are of utmost importance; "what I become is what I am." In all ways he needs understanding and assistance as his trials and errors lead to the development of a self that will be acceptable to him and to those with whom he must live.

Above all else, this youth is primarily concerned with his own development. With this increasing awareness of self, his values system and style of living are up for reassessment; these are reinforced and retained or discarded in favor of those values giving greater satisfaction to him as he pokes and pries and experiments with new social relationships and different ways of being. In this process the school is of critical importance and must be compatible, supportive, understanding, active and most of all, accepting of his right to be and of his right to his own personality.

We are concerned with his growth as an individual, but no less so with his effectiveness as a member of the group. As a citizen he intelligently participates in the improvement of his social structure and culture as well as the maintenance of the democratic system that fostered him. He must be properly impressed that his personal well-being hinges on the healthy structure of the group which supports him.

We believe that we must work to broaden the public understanding and support of our middle/junior high schools in order that programs may meet the needs and abilities of our increasingly diverse student body.

We recognize that school is but one of the community agencies affecting the education of adolescents; we maintain cooperative relations with the home, church and other agencies which contribute to the development and education of youth.

We strive to establish an educational atmosphere which will encourage originality and a respect for learning as a continuing process.

There is then in this guided process of growth and maturation a student diversity with a nearly universal self-seeking. From this basic need for differentiation arises the need for programming to meet diversity of being, the necessity of distinguishing the middle years from other educational levels, their recognition as distinctive and worthy of status, and the need for personnel oriented to and disposed toward working professionally at this level.

APPENDIX A

Block Schedule

Level 5

Module	Subject
1- 4	Math and Science
5- 6	Health, Safety, Physical Education
7- 8	Home Economics, Industrial Arts, Career Education
1-30 Min. Mod.	Basic Skills
10-11	Lunch, Clubs, Choir, Band, Projects
11-12	Art, Music
1-30 Min. Mod.	Foreign Language and Remedial
14-17	Language Arts and Social Studies

Level 8

Module	Subject
1- 2	Math
2- 4	Science
5- 6	Health, Physical, Career Education
7- 8	Home Economics, Industrial Arts
9-10	Independent Study, Remedial
11-12	Lunch, Choir, Band
13-14	Art, Music
15-16	Foreign Language, Basic Skills
17-18	Social Studies
19-20	Language Arts

Back-to-Back

Framework: Traditional Schedule

Interdisciplinary teams of teachers (Example, two English and two Social Studies) are scheduled for two periods with average class load (120). Basically the same as Simple Block Schedule except greater opportunities for flexible time, student, staff and teaching mode arrangements.

Period				
I	Teacher A Eng. II Sec. I (30 pupils)	Teacher B Eng. II Sec. 2 (30 pupils)	Teacher C S. S. II Sec. 3 (30 pupils)	Teacher D S. S. II Sec. 4 (30 pupils)
II	Teacher A Eng. II Sec. 3 (30 pupils)	Teacher B Eng. II Sec. 4 (30 pupils)	Teacher C S. S. II Sec. 1 (30 pupils)	Teacher D S. S. II Sec. 2 (30 pupils)

School Wide Block Schedule

Framework: Modular Schedule

Fundamentally requires team teaching in the base subjects (English-Social Studies, Math-Science). The school day may be divided into twenty (20) minute modules with each base team assigned four modules each. Team can allocate time, space and talent.

20 Min. Mod.	Level 7	Level 8	Level 9
1-4	Mathematics Science	Language Arts Social Science	Humanities Foreign Lang
5-8	Occupational Ed. Phys. Education	Mathematics Science	Lang. Arts Soc. Science
9-12	Humanities Foreign Lang.	Occupational Ed. Phys. Education	Mathematics Science
13-16	Lunch, Band, Choir, Club Mtgs., Independent Study		
17-20	Lang. Arts Soc. Science	Humanities Foreign Lang.	Occ. Ed. Phys. Ed.

Rotating Schedules

Framework: Traditional Schedule

Many alternatives can be designed into this type of schedule.

a. Each day, the last hour class is rotated, with the exception of the fourth period.

Period	M	T	W	T	F
I	1	2	3	5	6
II	2	3	5	6	1
III	3	5	6	1	2
IV	4	4	4	4	4
V	5	6	1	2	3
VI	6	1	2	3	5

b. A seven-period day in a traditional six-period day, including one or more activity periods.

Period	M	T	W	T	F
I	1	7	6	5	4
II	2	x	7	6	5
III	3	2	1	7	ó
IV	4	3	2	1	7
V	5	4	3	y	1
VI	6	5	4	3	2

c. Use of a rotating schedule with variable time blocks.

Per Period	M	T	W	T	F
45	1	6	5	4	1
45	2	1	6	5	3
60	3	2	1	6	4
60	4	3	2	1	5
90	5	4	3	2	6

Alternate Day Schedule

15 Min. Mod.

	Level 7				Level 8				Level 9			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1	Lang.	Type	Math		Occ.	P.E.	Humanities		Math		English S.S.	
2												
3									Science			
4	English		Science								Lang	Health
5									Lang	Type		
6	S.S.										English	
7			Lang	Health	Human.		P.E.	Occ.	Math			
8									Science		S.S.	
9	Type	Lang					Math					
10			English		English		Science		P.E.	Occ.	Humanities	
11					S.S.							
12	Math		S.S.				Hlth.	Lang				
13					Lang.	Type						
14	Science						Math		Human.		P.E.	Occ.
15							Science					
16			Health	Lang.	English							
17					S.S.							
18	Clubs		Choir		Clubs		Choir		Clubs		Choir	
19	Orchestra		I.S.		Orchestra		I.S.		Orchestra		I.S.	
20	Band		Lunch		Band		Lunch		Band		Lunch	
21												
22					Type				English		Math	
23	Occ.	P.E.	Humanities				English				Science	
24									S.S.		Health	
25							S.S.					
26					Math				Type			
27											Math	
28	Humanities		Occ.	P.E.	Science				English			
29							Lang	Hlth	S.S.		Science	

Flexible Modular Schedule

Framework: Modular Schedule

Schedule allows for varying size of groups according to the needs of a teaching mode with appropriate amount of time. Provides opportunity for large class activities, small group discussion and independent study. Schedule is difficult to generate manually and usually involves the use of a computer. Generally, no class meets five days a week and often no two days are alike. Some classes are longer than others. A portion of the student's day is unscheduled. This time is used for independent study, meetings with counselors and teachers, research and "open labs".

	Monday	Tuesday	Wednesday	Thursday	Friday
1	World Geography Small Group Room 110	World Geography Small Group Room 110	Biology 2 Small Group or Lab Room 126	World Geography Small Group Room 110	English 3 Small Group Room 111
2					
3					
4					
5	I.S.	I.S.		I.S.	
6	(Pupil Options)		I.S.		I.S.
7	Open Lab	Art I	Physical Sci. Large Group Room 203	Art I Room 118	Physical Sci. Small Group or Lab Room 206
8	I.M.C.				
9	Lounge	Room 118			
10	Art		I.S.	I.S.	
11	Etc.	I.S.			
12	Lunch		Lunch	Lunch	Lunch
13	I.S.	Lunch	I.S.	Language Lab	
14	Math 2		Math 2 Large Group Room 119		I.S.
15	Large Group	I.S.			Math 2 Small Group Room 201
16	Room 119			English 3 Small Group Room 111	
17	I.S.	English 3 Large Group Room 121	I.S.	I.S.	World Geo. Large Group Room 126
18	Physical Science Small Group or Lab Room 206				
19					
20		Biology 2 Small Group or Lab Room 126		Biology 2 Large Group Room 126	
21					I.S.
22					
23	I.S.			Math 2 Small Group Room 201	
24		Math 2 Small Group Room 201			French I Room 109
25	French I Room 109		French I Room 109		
26					

TAKEN FROM:
1972 Bulletin 722, Flexible Scheduling
Department of Education, Florida

APPENDIX B

A COLLECTION AND REVIEW OF UNIT TOPICS BY GRADE LEVEL
Prepared by Dr. John Jarolimek

Kindergarten--School Living
Working and Living Together
Our Families
Family Fun
Safety at Home and School

COMMENT: Units for kindergarten ordinarily deal with topics that help to familiarize the child with the world immediately surrounding him. The home and school provide the setting for these studies. With some kindergarten children it is possible to include, in a simple way, references to the world beyond the immediate environment.

Grade One--Families Near and Far
Families Long Ago
The Neighborhood Shopping Center
The World Around Us
People Who Help Us
The World of Work
Good Citizenship in the Neighborhood

COMMENT: The units for grade one are based in the local area, such as the neighborhood, but provision should be made to associate the local area with the larger world. A major criticism of first-grade units in particular and primary units in general has been that they have tended to be too confining and that their content has been thin and inconsequential. Units should provide for easy transition from the near at hand to the far away and back again at frequent intervals--when it is established that the backgrounds of pupils warrant such movement. Neighborhood and community services can be stressed in this grade.

Grade Two--Food from Farm to City
Ways We Travel
Our Town Then and Now
How We Get Our Food
Children of Other Lands
Using Our Natural Surroundings
Dividing the Work

COMMENT: The grade-two program should provide for frequent and systematic contact with the world beyond the neighborhood. Through the study of transportation, communication, food distribution and travel, the child begins to learn how his part of the world is connected to other places on earth.

Grade Three--People and Communities
- Communities of Our State
- Large Communities in Our Country
- Early American Communities
- Kinds of Communities (comparative study)
- A Community in Another Land (comparative study)
- Citizenship and Responsibility in the Community
- Meeting Basic Needs
- Making a Community
- A Community Grows

COMMENT: The grade-three program often emphasizes the larger community concept - What a community is, types of communities, why some communities grow while others do not, how communities provide for basic needs. Many programs include an outside community for purposes of comparison. Increasingly, schools are giving greater attention to the large, urban community.

Grade Four--The World As Man's Home
- Learning to Think Geographically
- Our Region and State
- Changing Ways of Living
- Others Who Share the World (comparative study)
- A World of Many People

COMMENT: In grade four the world as the home of man, showing various geographical features of the earth along with variety of ways of living, is often stressed. These studies help pupils understand some of the adaptive and innovative qualities of man. Home-state studies are popular in grade four; often they are included to meet legislative requirements. Comparative studies are commonly recommended.

Grade Five--Finding and Exploring a New World
- Early Explorations in the Western Hemisphere
- Living in Colonial America
- A Growing United States
- From Farms to Factories
- City Life in America
- The United States Today and Tomorrow
- Canada, an Independent Nation

COMMENT: Almost everywhere the fifth-grade program includes the geography, history, early development, and growth of the United States. The program may focus on the United States alone, or on the United States and Canada, or the United States, Canada and Latin America. The latter option makes the fifth-grade program a very heavy one. The fifth-grade emphasis should be coordinated with the eighth and eleventh grades in order to avoid redundancy.

Grade Six--LATIN AMERICA EMPHASIS:
- The Geography of Latin America
- Neighbors to the South

Exploration and Development of Latin America
Modern Latin America: Problems Facing Its People
Interdependency of the Western Hemisphere
The Organization of American States

EASTERN-HEMISPHERE EMPHASIS:
Units dealing with selected culture regions (such as North Africa and Southwest Asia; Western Europe; the USSR, Eastern Europe; South Asia; S.E. Asia; East Asia; Africa, South of the Saraha).

The Common Market Countries and Their Neighbors
Newly Developing Nations of Africa
Where the East and West Meet
The Moslem World
Leaders of the Dark Continent

COMMENT: The sixth-grade program may include Latin America or cultures of the Eastern Hemisphere. Both of these patterns are in common use. A major limitation of sixth-grade programs is that they attempt to deal with too many topics. Often this results in a smattering of exposures without the pupil developing any degree of understanding of anything. The same criticism applies to the seventh grade. Stronger programs emerge where teachers carefully select a few units that are representative of basic concepts having wide and broad applicability. For example, a class does not need to study all of the new African nations to develop some understanding of the problems of newly developing countries.

Grade Seven--Culture Regions of the Eastern Hemisphere (selected studies similar to those listed under grade six)
World Trade and Transportation
World Resources; Their Development and Use
Advanced and Underdeveloped Areas of the World
Latin American Studies (similar to those listed under grade six)
The Home State
People of the Non-Western World
Beginnings of Western Civilization

COMMENT: The nature of the seventh-grade program depends on the content of grade six. Either Latin America or culture regions of the Eastern Hemisphere are popular choices for this grade. Some schools are developing exciting programs in anthropology in grade seven. World geography is also included in some districts as are studies of the home state.

Grade Eight--Units relating to the American heritage; the United States, its growth and development

COMMENT: The study of the United States and the American heritage is widespread in grade eight. The program usually stresses the development of American political institutions and the development of nationality. The approach typically consists of a series of units arranged chronologically. This program should be planned within the context of the fifth and eleventh grades--which also include elements of American history--in order to avoid unwarranted duplication in the three grades. Defining the emphasis for each of these grades and differentiating appropriately among them in terms of content and approach has constituted a major problem for many schools.

Taken from Social Studies in Elementary Education
by John Jarolimek

Most curriculum patterns represent a combination or a variety of these three approaches. However, their general goals are usually quite similar.

APPENDIX C

Skills in Social Studies Education

K 12

SKILLS IN LOCATING AND GATHERING INFORMATION

* Locating Appropriate Pictures..
* Telling Main Ideas.....
* Asking Questions.....
* Selecting Facts and Ideas.....
* Use Newspaper and Current Magazines...
* Recording Main Ideas.....
* Locating Books Related to Subject...
* Interviewing.....
* Locating Magazines and Periodicals..
* Using Title Page.....
* Using Table of Contents.....
* Making Inventories.....
* Developing a Questionnaire.....
* Making Outlines.....
* Using Key Words.....
* Using A Dictionary.....
* Using Index.....
* Using Glossary.....
* Using Encyclopedia.....
* Using Appendix.....
* Using Preface.....
* Using Introduction.....
* Using Picture and Clipping File.....
* Using Topical Listings.....
* Using Atlas and World Almanac.....
* Using Card Catalog.....
* Taking Notes.....
* Using Footnotes.....
* Using Cross References.....
* Using Reader's Guide.....

*Indicates point of initiation. This chart made with "average" classroom groups in mind.

K 12

SKILLS IN PROBLEM SOLVING AND CRITICAL THINKING

(A) Analyzing and Evaluating Information

* Listening Intently.....
* Identifying Difficulties and Problems..
* Interpreting Titles.....
* Re-Reading for Clarification.....
* Checking with Other Sources.....
* Differentiating Fact From Opinion.....
* Determining How to Arrange and Organize Data..
* Interpreting Pictures, Graphs, Tables.....
* Identifying Sources.....
* Identifying Emotional Words.....
* Pointing Out False Ideas.....
* Evaluating Speaker's Qualifications.....
* Detecting Evidence of Propaganda.....

(B) Organizing Ideas

* Recounting Experiences.....
* Placing Ideas in Order.....
* Following Directions.....
* Separating Relevant from Unrelated Ideas...
* Keeping to the Point.....
* Selecting Appropriate Titles .....
* Listing.....
* Using Technical Terms.....
* Describing Important People and Events...
* Using Outlines.....
* Grouping Related Ideas.....
* Distinguishing Main Points.....
* Placing Events in Sequence.....
* Defining and Introducing a Topic.....
* Using Topic Sentences.....
* Checking Meaning of Vocabulary.....
* Presenting Conflicting Views and Statements.....
* Skimming and Summarizing Materials.....
* Making Bibliographies.....
* Making Footnotes.....

(C) Reaching a Constructive Compromise Skills

* Seeing Rights as a Majority Rule Principle.....
* Seeing Cause and Effect Relationships.....
* Comparing Problems with Previous Experiences...
* Recognizing what Inferences may be Made.....
* Suggesting Solutions.....
* Discovering Compromise that Enables Progess Without Destroying Basic Rights and Institutions.....

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Most curriculum patterns represent a combination or a variety of these three approaches. However, their general goals are usually quite similar.

K 12

IN INTERPERONAL RELATIONS AND GROUP PARTICIPATION

- Engaging in Fair Play
- Taking Turns
- Following Rules and Laws
- Listening to Reason
- Withholding Judgment Until Facts Are Known
- Observing Actions of Others
- Developing Courteous Behavior
- Learning How to Disagree
- Giving Constructive Criticism
- Finding Ways to Include Newcomers
- Introducing People
- Inviting People
- Planning and Contributing Ideas
- Dividing Responsibilities
- Keeping to the Task
- Showing Appreciation of Other's Efforts
- Making Choices and Decisions
  - Handling Interruptions
  - Suggesting Alternatives
  - Anticipating Consequence of Group Discussion or Action
    - Defending a Report
      - Suggesting Means of Group Evaluation
        - Following Parliamentary Procedure

SPECIFIC MAP AND GLOBE SKILLS

- Orienting One's Direction
- Learning to Make Map Plans
- Devising Symbols for Maps and Globes
- Interpreting Flat Maps
  - Learning Names of Cardinal Directions
  - Becoming Familiar with Map Symbols
  - Interpreting Map Symbols
  - Interpreting Political Maps
    - Interpreting Product Maps
    - Locating Places on Maps and Globes
    - Tracing Routes
    - Interpreting Topographic Features
    - Interpreting Scale of Miles
    - Interpreting Weather Maps
      - Using Parallels and Meridians
      - Interpreting Road Maps - Town - State
      - Interpreting Outer Space Maps
        - Interpreting Degree of Latitude Into Miles
        - Interpreting Degree of Longitude Into Time
        - Interpreting Polar Projection Maps

K 12

TIME AND SPATIAL RELATIONSHIP SKILLS

* Relating Dates to Personal Experiences.....
* Making Use of Calendar.....
* Developing Critical Thinking About Events and Dates.....
* Developing and Using Vocabulary of Time Expressions.....
* Placing Related Events in Chronological Order.....
* Developing Numerical Chronology.....

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